

## Local Update of Census Addresses Program (LUCA) Supplemental Information for Digital Updates

### I. General Business Rules

#### A. Definitions

1. *Jurisdiction* is the entity or entities that the participant is associated with and has registered to participate in the 2010 LUCA program.
2. *Geographic extent* is the geographic area for which the participant has permission to submit LUCA updates for a given jurisdiction. This is equal to the geographic area(s) of the jurisdictions for which they are responsible plus the geographic area of the county or counties surrounding the geographic area(s).
3. *City-style addresses* are those address records with a house number and street name. These are identified in the address list by having a value in the 'Mailing House Number/Building Number' and 'Mailing Street Name/Building Name' fields.
4. *MAF* is the acronym for the Master Address File. The MAF is a nationwide list of all addresses to support many of the Census Bureau's operations. Besides containing mailing addresses and ZIP Codes, a MAF record also contains geographic information about the location of addresses.
5. *Feedback* is the phase of the 2010 LUCA program where the Census Bureau provides data back to participants providing the disposition of the 2010 LUCA program-related updates that they provided to the Census Bureau.
6. *Structure point* is a map spot. A structure point is defined as a type of point feature that acts as a designation on a Census Bureau map to mark the location of one or more living quarters. Each structure point within a census block is assigned a unique number, which corresponds to an address in the MAF. A structure point will have an associated set of latitude/longitude coordinates.
7. *TIGER®* is the acronym for the Topologically Integrated Geographic Encoding and Referencing System (TIGER®). TIGER® is a computer database that contains a digital representation of all map features (streets, roads, rivers, railroads, lakes, and so forth) required to support Census Bureau operations, the related attributes for each, and the geographic identification codes for all entities used by the Census Bureau to tabulate data for the United States, Puerto Rico, and Island Areas.
8. *MAF/TIGER Feature Class Code (MTFCC)* is a code intended to classify and describe geographic objects or features. A feature class is a grouping of features in MAF/TIGER that share basic characteristics. A "feature" differs from a "feature class" in that the feature is an instance of the feature class. For example, "Lake" and "Road" are feature classes while "Lake Superior" and "Suitland Road" are features. The first letter of the MTFCC is used to group features into their common feature category. There are eleven generic feature categories.

“MTFCC and CFCC Crosswalk - Draft v. 1” is a table that shows the relationships between the Census Feature Class Codes (CFCCs in the TIGER/Line file) and the MTFCC (in the MAF/TIGER data base).

## **B. Three Participation Options**

Each participant has three participation options available for the LUCA program. For those participants receiving the address list, the Census Bureau will provide the address records for their jurisdiction only. Table 1 summarizes the relationships between the options and the products.

Table 1: Participation Options

<b>Product</b>	<b>Option 1</b>	<b>Option 2</b>	<b>Option 3</b>
Census Map Display	View/Update features and boundaries	View/Update features and boundaries	View/Update features and boundaries-
Census Address List	View/Update	View Only; Participant submits own list	Not supplied; Participant submits own address list
Census Address Count List	View/Update	View Only	View Only

## **C. Address List Data Security during Shipment**

The Census address list contains Title 13 data and, therefore, must be protected during shipment from and to the Census Bureau and the participant. To ensure the secure distribution of Title 13 data, the Census Bureau will use SecureZIP to encrypt and zip the address list into a self-decrypting archive using a password provided by the Census Bureau. The participant will then use this password for zipping the updated Census address list before shipment back to the Census Bureau. The participant may use any zipping software that enables password protection, such as PKZIP and WinZip.

## **II. Address List**

### **A. Address List Fields**

1. Table 2 is a listing of potential fields in the address list.

**Table 2: Address List Format**

<b>Field</b>	<b>Maximum Character Length</b>	<b>Format</b>
MAF ID	13	Fixed length numeric
MAFID for Duplicate Address	13	Blank; entered by participant
Action Code	1	Blank; entered by participant or application
State Code	2	Fixed length numeric
County Code	3	Fixed length numeric
Census Tract Number	6	Fixed length numeric
Census Block Number	5	Fixed length numeric
Tribal Subdivision	3	Fixed length alpha
American Indian/Hawaiian Home Land Trust Land Indicator	1	Fixed length numeric
Map Spot ID	5	Fixed length alphanumeric
Map Spot Coordinates - Latitude	9	Fixed length numeric
Map Spot Coordinates - Longitude	10	Fixed length numeric
House Number	21	Variable length alphanumeric
Street or Road Name	55	Variable length alphanumeric
Apartment/ Unit Number	24	Variable length alphanumeric
City -Style ZIP Code	5	Fixed length numeric
Location Description or GQ Name	100	Variable length alphanumeric
Non City – Style House Number and Street Name Mail Delivery Address (RR#, HCR#, or PO BOX#)	24	Variable length alphanumeric
Non City-style ZIP code	5	Fixed length numeric
GQ/HU Flag	1	Displays a 'Y' if the value is 2 or 3. Otherwise leave blank.
Urbanizacion (for Puerto Rico entities only)	28	Variable Length alpha

**B. Address List Action Codes**

Below is the current list of potential action codes that the participant can assign to Census address record. Note that the participant must indicate an address record as a group quarters via the Group Quarters Flag field.

- 'A' – Address added
- 'C' – Address field(s) was modified (changed)
- 'D' – Address to delete
- 'N' – Address is commercial (not residential)
- 'J' – Address is outside of the jurisdiction and not enough information is available for correction (to make it within the jurisdiction)

### C. Address List Update Rules

1. The participants can update city-style addresses only.
2. The participant can assign only one action code to an address record.
3. If a participant challenges the housing unit or group quarters count for a block, the participant then cannot provide any updates for individual address records associated with that block and vice versa (refer to section IV.B).
4. The participant can update any field for city-style address records except for the MAFID.
5. The participant may not update the MAFID.
6. If the participant copies the information from an existing address record to a new one, the new address record must have a unique MAFID. The participant determines the highest current value assigned to an existing MAFID, adds a value of "1" and assigns that value to the new address record.
7. The participant can select an address record in the address list, and the respective block will be noted on the map.
8. The participant can select an address record in the address list, and the values for the block for that address will be noted on the address count list.

### D. Address List Sorting

The following is a list of the sorts that a participant finds useful. The participant must return the data in the exact same layout as was provided to the participant in order for the Census Bureau to use the file for updating the MAF. The Census Bureau cannot process files with concatenated fields.

- **Sort by Line Number** - by Line Number, then the State Code, then the County Code, then the Tract Number, then the Block Number, then the Street Name Prefix Direction, then the Street Name Prefix Type, then the Street Name, then the Street Name Suffix Type, then the Street Name Suffix Direction, then the Street Name Street Extension, then the House Number. This is the default sort provided by the Census Bureau.
- **Sort by Geography** – the State Code, then the County Code, then the Tract Number, then the Block Number, then the Line Number.
- **Sort by ZIP Code** – the City-Style Mailing ZIP Code, then by Line Number.
- **Sort by House Name/Street Number** – the Street Name Prefix Direction, then the Street Name Prefix Type, then the Street Name, then the Street Name Suffix Type, then the Street Name Suffix Direction, then the Street Name Street Extension, then the House Number.

- **Sort by Geography/Address** – the State Code, then the County Code, then the Tract Number, then the Block Number, then the Street Name Prefix Direction, then the Street Name Prefix Type, then the Street Name, then the Street Name Suffix Type, then the Street Name Suffix Direction, then the Street Name Street Extension, then the House Number.
- **Sort by ZIP Code/Address** – the City-Style Mailing ZIP Code, then the Street Name Prefix Direction, then the Street Name Prefix Type, then the Street Name, then the Street Name Suffix Type, then the House Number.
- **Sort by Action Code/Geography** – the Action Code, then the State Code, then the County Code, then the Tract Number, then the Block Number, then the Line Number.
- **Sort by Action Code/House Name/Street Number** – the Action Code, then the Street Name Prefix Direction, then the Street Name Prefix Type, then the Street Name, then the Street Name Suffix Type, then the Street Name Suffix Direction, then the Street Name Street Extension, then the House Number.

### III. Address Count List

#### A. Address Count List Fields

Table 3 is a list of the fields in the Address Count List.

**Table 3: Address Count List Format**

Field	Maximum Character Length	Format
Entity ID Code	11	Variable length alphanumeric.
State Code	2	Fixed length numeric.
County Code	3	Fixed length numeric.
Census Tract and Suffix	7	Variable length numeric, pending suffixes.
Census Block and Suffix	5	Variable length alphanumeric.
Census Count of Housing Unit Addresses	7	Variable length numeric.
Local Count of Housing Unit Addresses	7	Variable length alphanumeric.
Census Count of Group Quarters Addresses	7	Variable length numeric.
Local Count of Group Quarters Addresses	7	Variable length alphanumeric.

#### B. Address Count List Update Rules

1. The participant provides a value in the Local Count of Housing Unit Addresses and Local Count of Group Quarters Addresses fields for any block in their geographic extent.

2. As noted in II.C.3 above, the participant may not provide any updates for individual address records associated with a block if the participant challenges the housing unit or group quarters count for that block.
3. The participant can select a block in the address count list, and the respective block will be noted on the map.
4. The participant can select a block in the address count list, and the addresses within that block will be noted on the address count list.

#### **IV. Map Update Rules**

##### **A. Legal Transactions**

- Add line/Add name/Add MTFCC
- Delete line
- Copy name, MTFCC, and address ranges from existing line/Add new line/Delete existing line
- Edit name
- Edit MTFCC
- Add structure point (for the Feedback phase only)
- Move structure point (for the Feedback phase only)
- Delete structure point (for the Feedback phase only)
- Add node/ Split line/Duplicate attributes

##### **B. Participant Allowed Actions**

1. The participant may add a linear feature.
  - a. The participant may start and end the feature at an intersection or at the end of a linear feature (point), on a linear feature (line), or in space. The participant may add curve points between the start and the end points.
  - b. The participant must choose a classification (listed in the Feature Classifications section below).
  - c. The participant must name added road features.
  - d. The participant may name the feature with acceptable types, prefixes, and types.
2. The participant may delete features (existing segments/ 1-cells)
  - a. The participant may delete existing features.
  - b. If feature is a block boundary, the user must change the MTFCC for the visible feature to the MTFCC for a must-hold block boundary in order to maintain the topology.
3. The participant may add nodes to a line to split a feature. When the participant adds a node to split a feature, the new segments must have the attributes (names, addresses, and classification code) of the original feature. The participant may modify the lines and their names and classifications separately.
4. The participant may add, edit, and delete primary names.

5. The participant may not add, edit nor delete alternate names.
6. The participant must provide the name, MTFCC, and address ranges (attributes) for all new road features.
7. The participant must provide the MTFCC for all new lines.
8. The participant may edit the classification of a feature (refer to section IV.D).
9. The participant may view attribute information (all names, addresses, classification code, left geography 2-cell, and right geography 2-cell) for all features.
10. For the initial LUCA products, the participant may change or delete structure points for city-style addresses only. Additionally, the participant must correct or delete the associated address record on the address list.
11. If the participant marks an address record for a city style address in the address list with a 'Delete' action code, the participant must also mark the associated structure point as deleted on the map.
12. For feedback LUCA products, the participant may move, add, and delete structure points. The participant must also move, add, or delete the associated structure point on the map.
13. The participant can select a block on the map, and the addresses within that block will be noted on the address list.
14. The participant can select a block on the map, and the values for that block will be noted on the address count list.

### **C. Feature Classifications**

The following features will appear on the map for the user to view and/or edit:

1. Road Features
  - Interstate Highway or Primary road with limited access
  - Primary Road without limited access, US Highway, State Highway, or County Highway, Secondary and connecting roads
  - Local Neighborhood Road, Rural Road, or City Street
  - Vehicular Trail (4WD)
  - Ramp
  - Service Drive usually along a limited access highway
  - Walkway/Pedestrian Trail
  - Stairway
  - Alley
  - Private Road for service vehicles (logging, oil fields, ranches, etc.)
  - Private Driveway
  - Airport or Airfield

2. Water Features

- Stream/River
- Braided Stream
- Canal, Ditch or Aqueduct

3. Railroad

- Railroad Feature (Main, Spur, or Yard)
- Carline, Streetcar Track, Monorail, Other Mass Transit Rail
- Cog Rail Line, Incline Rail Line, Tram

4. Miscellaneous Features

- Political Boundary
- Pipeline
- Power Transmission Line
- Fence Line
- Ridge Line
- Aerial Tramway/Ski Lift
- Airport or Airfield
- Property/Parcel Line
- Ferry Crossing

**D. Topology**

1. The participant can perform only those actions that will enforce the basic rules of topology in order to ensure that coincident features remain coincident.
2. All topological requirements are met before the participant delivers the updated file to the USCB.